

Amendments to the Claims

Please amend claims 1, 2, 5, 6, 10, 11, 13, 15, 18 and 19 as set forth below. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) Apparatus for loading therapeutic materials into brachytherapy needles comprising:

a loading channel tube with proximal and distal ends, the loading channel configured to accept a column of radioactive seeds and spacers, a lumen extending therebetween, and first and second transverse slots disposed between the proximal and distal ends;

a first cartridge comprising a plurality of seed chambers, the first cartridge slidably disposed in the first transverse slot to slidably intersect the loading channel between the proximal and distal ends; and

a second cartridge comprising a plurality of spacer chambers, the second cartridge slidably disposed in the second transverse slot to slidably intersect the loading channel between the proximal and distal ends.

2. (Currently amended) The apparatus of claim 1 further comprising a plunger configured for reciprocation in the loading channel lumen.

3. (Original) The apparatus of claim 1 further comprising means for retaining a spacer in each one of the plurality of spacer chambers.

4. (Original) The apparatus of claim 1 further comprising means for retaining a radioactive seed in each one of the plurality of seed chambers.

5. (Currently amended) The apparatus of claim 1 wherein the distal end of the loading channel tube is adapted to be coupled to disposed within an interior lumen of a brachytherapy needle.

6. (Currently amended) The apparatus of claim 1 wherein the first and second cartridges are configured to be manually reciprocated relative to the loading channel advanced through the first and second transverse slots.

7. (Original) The apparatus of claim 1 wherein the first cartridge is fabricated from a shielding material.

8. (Original) The apparatus of claim 7 wherein the shielding material is lead.

9. (Original) The apparatus of claim 1 wherein the first and second cartridges are fabricated from a transparent or translucent material.

10. (Currently amended) The apparatus of claim 1 ~~9~~ wherein the first cartridge intersects the loading channel at a location axially offset from the second cartridge ~~material is a polymer.~~

11. (Currently amended) A method for loading therapeutic materials into brachytherapy needles comprising:

providing apparatus comprising a loading channel tube with proximal and distal ends, a lumen extending therebetween, and first and second transverse slots, a first cartridge comprising a plurality of seed chambers loaded with radioactive seeds, the first cartridge slidably intersecting the loading channel disposed within the first transverse slot, a second cartridge comprising a plurality of spacer chambers loaded with spacers, the second cartridge slidably intersecting the loading channel disposed within the second transverse slot, a plunger, and a brachytherapy needle;

coupling the distal end of the loading channel to tube within a lumen of the brachytherapy needle;

inserting a distal end of the plunger within the loading channel tube lumen; and

distally advancing the plunger relative to the loading channel to advance tube to dislodge a radioactive seed or a spacer from a cartridge chamber aligned with the loading channel; and tube lumen and to advance the seed or spacer into the needle lumen

advancing the plunger relative to the loading channel to advance a column of seeds and spacers into the brachytherapy needle.

12. (Original) The method of claim 11 further comprising proximally retracting the plunger.

13. (Currently amended) The method of claim 12 further comprising sliding the cartridges relative to the loading channel within the transverse slots to align subsequent seeds and spacers with the loading channel tube lumen.

14. (Original) The method of claim 13 further comprising loading the needle with seeds and spacers in a predetermined packing arrangement.

15. (Currently amended) Apparatus for loading therapeutic materials into brachytherapy needles comprising:

a loading channel tube having proximal and distal ends, a lumen extending therebetween, and first and second transverse slots disposed between the proximal and distal ends;

first and second cartridges slidably disposed to slidably intersect the loading channel in the first and second transverse slots, the first and second cartridges comprising a plurality of first and second chambers, respectively; and

a plunger disposed for reciprocation within the loading channel lumen.

16. (Original) The apparatus of claim 15 further comprising means for retaining a spacer in each one of the plurality of second chambers.

17. (Original) The apparatus of claim 15 further comprising means for retaining a radioactive seed in each one of the plurality of first chambers.

18. (Currently amended) The apparatus of claim 15 wherein the distal end of the loading channel tube is adapted to be coupled to disposed within an interior lumen of a brachytherapy needle.

19. (Currently amended) The apparatus of claim 15 wherein the first and second cartridges are configured to be

~~manually advanced reciprocated relative to the loading channel through the first and second transverse slots.~~

20. (Original) The apparatus of claim 15 wherein the first cartridge is fabricated from a shielding material.